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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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10/532,962

05/12/2005

Juha Leimu

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05/18/2007

COHEN, PONTANI, LIEBERMAN & PAVANE

551 FIFTH AVENUE

SUITE 1210

NEW YORK, NY 10176

EXAMINER

HUG, ERIC J

ART UNIT

PAPER NUMBER

1731

MAIL DATE

DELIVERY MODE

05/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-------------------------------------|--|
| Office Action Summary | Application No. 10/532,962 | Applicant(s) LEIMU ET AL. | |
| | Examiner Eric Hug | Art Unit 1731 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 recites "the sealing is at least a single labyrinth sealing, more preferably a multi labyrinth sealing". The claim is indefinite because it claims both a single labyrinth sealing and a multi labyrinth sealing. It is noted that a single labyrinth sealing is already claimed in claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 4-7, 9-13, 15, 23, 25-28, 30, 31, 33-36, and 38-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Jokinen (WO 00/50693).

Jokinen discloses a paper machine with two drying cylinders 10 and 12, a turn roll 14 arranged between the cylinders, and a paper web 16 supported by a wire 18. The wire forms a pocket 20 between the two cylinders and turn roll. The wire 18 forms an opening nip 22 over the

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first drying cylinder and a closing nip 28 over the second drying cylinder. A blow box with throttling means 50 is arranged in the pocket region. The throttling means is a cross-direction mechanical sealing element. In Figure 9, the mechanical throttling means 50 is a wave-shaped blade 51' projecting toward the wire 18 with the aid of a spring 51. See particularly page 19, lines 1-21 for a description of the blade, its position relative to the wire, and its function.

Regarding claim 1, the wave-shaped blade is a labyrinth sealing element, the position of which is adjustable relative to the moving wire. The blade is presumed to be stiff. Regarding claim 2, the blade is shaped to create regions of negative pressure that prevent or reduce air flow between those regions. The regions can be at different negative pressures. The negative pressures can be controlled by moving the blade closer or further from the moving wire. Regarding claims 4 and 15, the distance of the blade from the wire is disclosed on page 13, lines 5-7. This includes close proximity to the wire. Regarding claim 5, throttling means may be arranged as successive blades (page 19, lines 8-10). Regarding claim 6, the blow box is effectively a frame for mounting the blade. Regarding claim 7, the blade is a multi-chambered labyrinth sealing element. Regarding claims 9, 23, 25-28, and 30, as indicated in Figure 9, air holes are provided in the frame supporting the blade. Regarding claims 10-13, 31, 33-36, and 38-39, the blade swivels about a hinge-like pivot point on the frame of the blow box. This pivot point is located higher than the blade itself. The blade is therefore deemed to be arranged so that gravity pulls the blade away from the wire and the pressure effect creates air flows that draw the blade towards the fabric.

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2. Claims 1 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Schiel et al (US 5,341,579).

Schiel discloses a paper machine with two drying cylinders 10 and 11 of a single wire dryer group, a reversing roll 12, a web of paper 9 which is to be dried, and a porous support belt 8 for the web which travels from the first drying cylinder 10 to the reversing roll 12 and to the second drying cylinder 11. A suction box 20 is provided in the region where the support belt 8 separates from the first drying cylinder 10. The longitudinal walls 21 of the suction box 20 are provided with yieldable sealing strips 30, 31, which extend transversely to the direction of travel of the web and over the entire transverse length of the support belt 8. The sealing strips 30, 31 are mounted swingably on holders formed on the longitudinal walls 21 of the suction box. The distance between each sealing strip holder and the outer surface of the drying cylinder is adjustable. Each sealing strip has a stiffness that resists deformation in the event of a difference in pressure. The two sealing strips are effectively a single-chambered labyrinth sealing element. The sealing strips may be made of a plastic or metal (column 4, lines 50-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 3, 8, 16-21, 24, 29, 32, and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jokinen (WO 00/50693) in view of Kahl (US 6,192,597).

The features of the multi-chambered labyrinth sealing element of Jokinen are described above. The feature of the claims not disclosed by Jokinen is the use of a pressure medium for guiding the location of the sealing element relative to the moving wire. Kahl discloses a sealing element for creating low pressure regions against a moving wire in a paper machine dryer section. The sealing element is similar in construction as that of Jokinen and used in a similar manner. Kahl discloses a pressure loading element is a known alternative to a spring loading element, see Kahl (column 2, lines 31-38). One skilled in the art would recognize utilizing the claimed pressure medium as a known alternative to a spring in the sealing elements of Jokinen.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Each of the following references disclose tandem sealing elements in conjunction with a wire or fabric in a paper machine.

Kahl et al (US 6,740,204)

Milosavljevic (US 6,189,232)

Kotitschke (US 5,782,009)

Haessner et al (US 5,477,624)

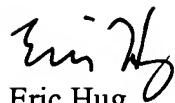
Thomas (US 4,359,827 and US 4,359,828)

Goodwillie (US 3,072,181)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 571 272-1192. The examiner can normally be reached on Monday through Friday, 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Eric Hug
Primary Examiner